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**United States Patent** [19]  
**Scarpa**

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[54] **AUTOMATIC FREQUENCY CONTROL  
USING SPLIT-BAND SIGNAL STRENGTH  
MEASUREMENTS**

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[57] **ABSTRACT**

A technique for maintaining a center frequency of an input signal at a nominal center frequency. Apparatus which implements this technique divides, using a pair of bandpass filters (122, 124), the modulation bandwidth of the input signal into two halves (half-bands) and measures the signal strength of the input signal in each half-band. Then, circuitry (126, 128, 130), connected to each filter, compares the signal strengths of the signals passing through each filter. The circuitry produces a difference signal representing a difference between the strength of each signal passing through each respective filter. The difference signal is used to adjust a frequency of a local oscillator signal produced by a local oscillator (112) within a tuner (104) such that the center frequency of the input signal is maintained by the tuner at the nominal center frequency.

22 Claims, 5 Drawing Sheets

[56] **References Cited**

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